



Baltic Marine Environment Protection Commission

Group for the Implementation of the Ecosystem Approach

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Background

[BONUS ROSEMARIE](#) project is using a specific systematic review method to conduct three separate syntheses on the existing scientific knowledge of the “ecosystem services”, “human health and well-being” and “monetary and non-monetary valuation methods” related to the Baltic Sea. The project partners are Finnish Environment Institute (SYKE), Kungliga Tekniska Högskolan, Estonian University of Life Sciences and Gottfried Wilhelm Leibniz Universität Hannover. The project is coordinated by Ms. Soile Oinonen (SYKE). Since the BSAP update and the second cycle of MSFD PoM are timely, the project team has agreed to focus the syntheses, as much as possible, to serve these processes. As a part of the BONUS ROSEMARIE participatory process GEAR 21-2019 contributed to the project work by participating on a structured group interview. This background document and related presentation gives updated information on the project results and an outline for the final seminar of the project. The final seminar is organized online and together with other two BONUS synthesis projects.

Action requested

The Meeting is invited to:

- take note on the results of the BONUS ROSEMARIE project results;
- take note on the final (online) seminar date (16.6.2020, UTC+3) of the BONUS ROSEMARIE, BONUS FUMARI and BONUS DESTONY projects.

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Project funding

- BONUS ROSEMARIE receives funds from BONUS (Art. 185), which is jointly funded by the EU, the Estonian Research Council and the Swedish Research Council Formas.
- The project is a part of the **BONUS 2017 Synthesis call** - https://www.bonusportal.org/files/5802/BONUS_Briefing_28_Synthesis.pdf
- The call topic addressed is: **Non-monetary values of the Baltic Sea ecosystem goods and services provided to human lifestyles and well-being** (relevant to the themes 4.2, 2.2, 3.4 of the BONUS strategic research agenda, update 2014)
 - Expected outcomes:
 - A review of the ecosystem services provided to humans by the Baltic Sea and linking them to human lifestyles and well-being
 - Identifying the links and possible positive and negative synergies between different marine ecosystem services
 - A review of knowledge on human health and well-being effects of the Baltic Sea ecosystem
 - An analysis of methods and models available to estimate nonmonetary values of marine ecosystem services
 - An analysis of methods and models available to estimate monetary values of marine ecosystem services
 - Each project is expected to produce as its deliverables at **least three review papers** devoted to different aspects of the problem, **each accompanied by a policy brief(s) distributed to the potential users in a targeted manner** as well as appropriate, popular dissemination materials targeting broad society

Systematic review method

- BONUS ROSEMARIE applies systematic mapping following Collaboration for Environmental Evidence guidelines and ROSES reporting standards.
- The method enables transparent, repeatable and objective literature review.

Synthesis 1: Ecosystem services

- Review question: “What scientific evidence exist on the supply of marine and coastal ecosystem services in the Baltic Sea?”
- 11 databases were searched
- 1006 research articles were found of which 57 were found relevant in answering the review question
- Three most commonly researched ecosystem services are
 - fish provisioning
 - nutrient regulation
 - recreational aspects of human interaction with nature
- 7 publications mention connection to BSAP goals

- 12 publications refer to one or more MSFD Descriptors

Synthesis 2: Valuation methods

- Review question: “Which value descriptions are used in monetary and non-monetary valuation studies on benefits from ecosystem services in the Baltic Sea?”
- Monetary methods included in the review: Market price, Avoided cost, Damage cost, Abatement cost, Replacement costs, Production function, Travel cost, Hedonic price, Choice experiment, Contingent valuation, Benefit transfer, Cost-Benefit-Analysis
- 1307 research articles were found of which 141 were screened at full text level and 106 research articles were found relevant in answering the review question
- Non-monetary methods included in the review: time-use assessment, photo-elicitation surveys, photo-series analysis, preference assessment, narrative assessment, Q-methodology, participatory GIS, participatory scenario planning, deliberative assessment, and multi-criteria analysis
- Non-monetary valuation: 303 articles were found of which 19 were screened at full text level and only 6 papers were found relevant in answering the review question
 - Results from non-monetary valuation studies do not symbolize “people’s preferences, perceptions, motivations or underlying values related to ecosystem services.
 - Many of the studies assess physical changes, not the value of these changes to society

Synthesis 3: Health and well-being effects

- Review question: “What linkages have been researched between Baltic Sea ecosystems and the positive and negative impacts to human health and well-being?”
- Protocol of this systematic map is published at the Environmental Evidence Journal. The article is open-access and can be read from here: <https://environmentalevidencejournal.biomedcentral.com/articles/10.1186/s13750-020-00189-6>
- 6756 research articles were found and after title and abstract screening 2141 research articles were found relevant in answering the review question.

Animation

- Summary animation of the project is available at Youtube with subtitles in Estonian, Finnish, Germany and Swedish
- <https://www.youtube.com/playlist?list=PLqbGx2iTj0UAzombEHizK7s0-gjVX6yFL>

Final Seminar of 3 BONUS Synthesis projects:

- Online seminar: Baltic Sea Science Synthesized – Time to Take Evidence-based Actions for the Well-being of the Sea and People
- 16th of June 2020 at 12:00–14:00 (UTC+3)
- [https://www.syke.fi/en-US/Current/Events/Online_seminar_Baltic_Sea_Science_Synthe\(56435\)](https://www.syke.fi/en-US/Current/Events/Online_seminar_Baltic_Sea_Science_Synthe(56435))
- [BONUS ROSEMARIE: Blue health and wealth from the Baltic Sea – a participatory systematic review for smart decisions](#)
- [BONUS FUMARI: Future Marine Assessment and Monitoring of the Baltic](#)
- [BONUS DESTONY: Decision support tool for management of the Baltic Sea ecosystem](#)